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A Study of the Sequence of the Professional Education Program for Elementary School Teachers at Utah State University

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A STUDY OF THE SEQUENCE OF THE PROFESSIONAL EDUCATION PROGRAM FOR ELEMENTARY SCHOOL TEACHERS AT UTAH STATE UNIVERSITY

by

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INTRODUCTION

Education, like any other profession, is responsible for constant improvement. The professional teacher education institutions are constantly looking for ways of improving professional teacher education programs. The course sequence of the teacher education program is an area for continual improvement. Every teacher educator has a theory as to what is the best teacher education program and what is the best sequence for this theory program. The literature has revealed very little in the area of a sequence for the teacher education program.

Purpose of the study

The Dean of the College of Education, Utah State University, requested the author to analyze the professional program of professional education for elementary school teachers.

This study will be concerned with the following: (1) What are the essential elements of a professional elementary teacher education program; (2) Assuming there are essential elements, is there a recommended sequence; and (3) To what extent do the students at Utah State University follow this or any sequence in completing requirements for their professional teacher education.

Definitions

The term "sequence" as used in this study refers to

the "order" of which professional courses in education are given or taken.

The term "professional education" will refer to those college courses that are concerned specifically with the education of elementary school teachers.

The term "general education" will refer to those college courses that are not specifically required for elementary teacher education. These courses may be taken by the student to complete institution requirements.

The term "student teaching" will refer to the laboratory period of the teacher's professional education, in which the student is actually teaching children in a classroom situation.

Delimitations

This study is concerned only with the sequence of the professional education courses of the prospective elementary school teachers who completed at least 45 quarter-credit hours of professional elementary education at Utah State University.

Source of data

Each year Utah State University graduates many teachers. For one reason or another many of these teachers may not have taken all of their work at this institution. Many of them are third year transfer students from other institutions. Others are students that have had many years of teaching service but have just completed enough work to qualify for graduation and state teacher certification. Every student

was not truly qualified as a completely trained teacher of Utah State University. The students that were chosen for analysis were students of the 1957 graduating class that had completed at least 45 quarter-credit hours of professional elementary education at Utah State.

This year's graduating class contained 42 prospective teachers that had completed at least 45 quarter-credit hours of professional elementary education at Utah State University. In selecting this group, the writer found that the students fell into three sub-groups: regular students, those who started as freshmen at the University in the fall of 1953; transfer students, those who started their college training at another institution, either a two-year junior college or another four-year institution; and interrupted students, those who started their college training several years before 1953 and finally accumulated enough college credits to graduate in 1957. For the three sub-groups the university transcripts were secured for analysis.

The professional teacher education programs of four well known teacher training institutions were chosen to be studied. The institutions selected were George Peabody College for Teachers; University of California, Berkeley; State Teachers College, Troy, Alabama; and the New York City College. These four colleges were chosen because they were well known institutions of higher learning. The author acknowledges that there are many other well known colleges and universities that could have been chosen.

The information about the four professional programs was obtained from the published college catalogues, from the review of literature, and from correspondence with the following staff members of the different teacher education institutions: Joseph G. Cohen, Ph. D., Dean of Teacher Education College, New York City College; Robert A. Davis, Ed.D., Professor of Educational Research, George Peabody College for Teachers; Harvill Harris, Ph.D., State Teachers College, Troy, Alabama; and James C. Stone, Ed.D., Director of Teacher Education, University of California, Berkeley.

REVIEW OF LITERATURE

The professional teacher education program is designed to help develop the understanding, attitudes, and skills that are needed to guide the learning process of young students. It is important that today's teachers be masters in the areas of education. The question of a logical sequence for an educational program that would develop the satisfactory understanding, attitudes, and skills has been the importance of this study.

When should professional education start?

The first question that arises is: When in the college life of a student should his professional education begin? Hollis L. Caswell stated in his article that the professional education of a teacher should begin early in the college life of the student and a four-year program should be the minimum for satisfactory teacher preparation (3, p. 82).[1] The student should begin his professional education as soon as he understands what his professional objectives are. His professional education should parallel his general education ". . . with gradually increasing emphasis until it becomes dominate at the end of the program". The

1. In this study the material will be authenticated in this manner. Following the material to be authenticated, parentheses will inclose the bibliography reference number and a page number, the first being a bibliography number and the second being a page number.

tendency has been for a more abrupt separation of the general education and of the professional education.

Florence B. Stratemeyer stated: "If learning proceeds most effectively from the interest and recognized goals of the student, then study relating to their vocational choice should begin early in the college program (16, p. 169)." Stratemeyer goes on to back up her statement with comments of two other workers in the field, Caswell and Bigelow (16, p. 170).

Caswell relates the vocational objective very closely to the achievement drives of youth:

> The vocational objective is one of the strongest in the development of young people. Tied as it is to achieving independent status and membership in the adult community and to establishing a home, it is a tremendous motivating force. This force operates to stimulate maximum effort, to enrich the meaning of what is learned, and to facilitate integration of knowledge by providing a dominant organizing center of purpose. These effects permeate general education as well as the professional sequence if the professional objective is clearly formed and the program well planned. Thus, the whole educational experience of the student can become more vital and significant if the objectives of general education are interrelated (8, p. 82).

Bigelow makes a very strong point of satisfying the ambitions of the student as early as they become apparent to the student. Bigelow has taken the same position as Caswell:

> There is another reason for believing that courses directly relating to teaching and its problems should begin early in a college program and continue in parallel with other types on instruction. When a young person conceives an ambition to become a teacher it is psychologically unsound to refuse him all opportunity to find out what teaching is like, to watch and work with children, to check

> on the validity of his vocational impulse, to begin to see how what he is learning everywhere may in due time be brought to bear on the performance of his teaching task. We no more learn than we grow in layers. We are persons, not things, and the foundations metaphor is dangerous (3, p. 24).

The need for constant revision of the teacher education program has been stated many times in the literature. Engleman brought out the idea that we need to modernize and keep up to date the teacher education program. Education should not be ". . . behind cloistered walls and untarnished by the work a day world. . . (13, p. 159)." This kind of program ". . . is of little value to teachers. . . institutions of the world and problems of the world must be understood (13, p. 159)." The author concluded from this article that Engleman would agree with Caswell, Bigelow, and Stratemeyer on this problem of when professional educational sequence should start.

Caswell not only considers the early start of the professional program important to the students understanding, but also that the college of education should work very closely with other colleges of the university to insure a well planned program for the student (8, p. 89). The author considers that the preceding statements by Engleman would infer the meaning of Caswell.

Educators who have written on teacher education have supported an early exposure to professional education subject matter in the college career of the student. A vast majority of the existing teacher education programs make provision for this. On the other hand, liberal arts colleges have moved the concentration of the professional

colleges have moved the concentration of the professional education to the final year (4, p. 452).

Why have educational sequence?

Caswell stated that some of the ". . . sharpest conflicts in the entire field of education," have come out of trying to arrive at an agreement in the sequence of teacher education (8, p. 80). Caswell further stated, "We can hardly hope to develop a view point generally acceptable, but we should be able to extend our understanding of the problem we face (8, p. 81)." He also considers that educational sequence is very important to the professional teacher education program for near the end of his article he stated, "It is highly important that a plan of curriculum organization in professional teacher education provide for all teachers a foundation of understandings and beliefs. . . (8, p. 89)." The professional teacher education program should train the student in understandings and beliefs that will enable them to work in all situations and teach all kinds of children.

Armstrong has taken the view point that the professional schools - law, medicine, dentistry, pharmacy, etc. - have curricula whereby a student becomes a member of that profession upon the completion of the required curriculum. He stated, "There is no curriculum for teacher education in the same sense that there is a curriculum for medicine, dentistry, law, and pharmacy (1, p. 46)." Teacher education curriculum has undergone no fundamental change. There needs

to be a change or revision. Reason for the change is that teacher education does go off in every direction. The curricula for law and medicine follows a definite pattern - education, no (1, p. 47).

As a recorder for a study group of the American Association of College Teachers, Ernest Cason summarized the feeling of the group by saying, "Universities which include teacher education as one of their functions should recognize the need for bringing all elements of teacher education into some organizational structure (6, p. 83)."

Area and sequence

The area of sequence covers the areas that should be contained in the teacher education program and the order or sequencial arrangement of the contents of the teacher education program.

Contents of the program. The contents of a teacher education program should offer academic growth and stimulation for the students of the program (16, p. 175).

The National Education Association Study Group that studied the contents of a four-year program listed 14 "musts" for an effective teacher education program (10, p. 71).

1. Professional courses should include guidance, evaluation, and audio-visual aids.
2. Opportunity for frequent consultation with students.
3. Intergration of all parts and segments of program to prevent overlapping.
4. Student teaching should include life situations, both in and out of the classroom.
5. Student teaching should be intensive in spirit and sufficient in duration, diversity, and sequential time periods to be practical and gainful.

6. The success of any program depends upon an enthusiastic approach sufficient in depth to carry over from teacher to student.
7. Orientation in professional and parallel organizations such as the PTA and the FTA.
8. Interest student in having formal and informal conferences with parents in order for him to feel his role of a teacher.
9. Program should be adjusted to individual students, in terms of background and educational experiences.
10. Colleges should be encouraged to study the trend of developing and measuring teacher compentences.
11. Colleges should be encouraged to develop competences. (Such procedures are not geared to screening students but for the purpose of improving the college program.)
12. Students and teachers should have opportunity to have experiences in democratic process of planning general education courses.
13. Colleges should encourage students to participate in valuable and varied campus experiences as well as with the community organization.
14. Develop a spirit for experimentation, exploration, and creativity in all students.

These "musts" seem to include either directly or indirectly all of the areas that were included in any of the other publications.

The National Council for Accreditation of Teacher Education gave the standards for a professional teacher education program as follows (15, p. 15-16):

> The common and differentiated aspects of all curricula offered should be in harmony with the stated teacher education objectives of the institution. Each curriculum should be specifically planned in terms of the common needs of all teachers and the special needs of persons who will fill the position for which the curriculum is designed. The planning should be with reference to both the subject matter and the professional education needed to prepare for a specific school position. The adoption of subject-matter majors designed for another purpose or the fulfillment of requirements made by some outside agency does not necessarily

satisfy this standard. An institution should plan common and differentiated aspects of all curricula according to principles the faculty can defend.

Institutions offering graduate curricula for school personnel should provide substantial field services to the schools relating to the graduate curricula offered.

More specifically, each curriculum offered will be appraised on the basis of the following criteria:

1. All curricula should offer the students the opportunity to become well educated persons.
2. All curricula for preparing school personnel should provide the common subject matter and professional education needed by all teachers, whether elementary, secondary, vocational, administrators, or other specialists.
3. Each curriculum should differentiate to the extent necessary to provide the subject matter and professional education required by the position to be filled.
4. There should be a planned sequence or pattern for each curriculum consisting of the subject matter and professional courses which all must take to complete the curriculum. Because of the differences in undergraduate curricul which teachers have had, the patterns for graduate curricula will necessarily be more flexible. Such curricula should, when combined with the undergraduate curriculum, constitute a satisfactory pattern.
5. Each student should be expected at some point to commit himself to a curriculum and follow it to completion. If students are permitted to enter a particular curriculum at more than one point (sophomore, senior, etc.), the program should be so planned that the required courses will follow in an orderly sequence.
6. Curricula designed for experienced teachers, for former teachers returning to service and for college graduates with no specific professional preparation should each have its own pattern of subject-matter and professional education courses based on principles that can be defended.
7. Only those courses which make effective use of school and community resources should be offered off campus. Regular academic and professional education courses which require library or laboratory facilities that cannot be provided in off-campus situations should be offered only on campus where such facilities are available. The amount of credit for off-campus study should be offered.

8. In the interest of high quality scholarship and the performance of full professional responsibility, persons in full-time employment should be limited in the amount of on-campus and off-campus work which they may take during an academic year.
9. Summer session work should be designed to meet the needs of the constituency to be served. The offerings should include a balance as between subject matter and professional courses. Students should be permitted to enroll for credit toward the completion of a curriculum in only those courses outlined and designated as electives for that curriculum. Credit for fulltime summer session students should not exceed one semester hour of graduate credit per week, nor more than eight for six weeks of undergraduate study for exceptionally strong students.

The National Education Association Portland Conference report pointed out that the general education program for elementary teachers should be the same as for any other member of our society, but the professional education program should include understandings, skills, and attitudes peculiar to the teaching profession. Here, summarized, are five "musts" for the professional program (12, p. 55).

The program should:

1. Be taught by superior teachers.
2. Include study and research.
3. Include direct exercises with children.
4. Acquaint students with instructional materials.
5. Include association with professional people as they meet in professional and community groups.

The Portland Conference recommended that the four-year professional teaching program have a requirement of 27 to 36 semester hours. The conference report broke the program

down as shown in table 1 (12, p. 58).

Table 1. A breakdown of the areas and time to be alloted in a four-year program, as recommended by the N.E.A. Portland Conference

Areas	Semester Hours
Common Professional	9 to 12
Student Teaching	8 to 12
Materials and Technique	10 to 12

The common professional area includes classes or topics concerned with understandings of the child and the school. The material and technique areas would be covered by classes and topics concerned with understandings of the curriculum and methods.

The Commission on Teacher Education said the trend in curriculum construction is toward a few relatively large and inclusive units and away from the large number of short specialized courses (11, p. 94).

The New York State Teachers College, according to Stratemeyer, has alloted a total of 36 semester-credit hours or 54 quarter-credit hours for the professional program. This amounts to about one third of the total time of the four-year program, based upon a 120 semester-credit hour or 180 quarter-credit hour program. The Commission on Teacher Education stated that, "From one eighth to one sixth will ordinarily suffice for strictly professional instruction (11, p. 102)". This fraction of

the total program would be equivalent to 20 semester-credit hours or 30 quarter-credit hours. The New York State program as recommended by Stratemeyer would represent an enrichment of about 50 per cent over the maximum program recommended by the Commission. This program is shown in table 2.

Table 2. Professional sequence in elementary education*

Year	Course Area	Semester Hours
1st	Child Development	6
2nd	Child and the Curriculum	6
3rd	Child and the Curriculum	6
	Student Teaching	15
4th	Professional Sequence Seminar	3
	Total	36

* Stratemeyer, Florence B., The Professional Sequence in Teacher Education. p. 161.

The Commission on Teacher Education in a summary report from the Dekalb Conference gave a listing of the contents of the curriculum for teacher education as follows (10, p. 70):

Professional Education to include:

1. Over view of modern concepts of education.
2. Human growth and Development.
3. Meaning, purpose, and problems of public education.
4. Introduction to methods, materials, and curriculum organization.
5. Supervised laboratory experience.

There was no indication if this content was listed in

a climactic order or not, but the author surmized that order was intended to be climactic.

Clark, in his study of "The Curriculum for Elementary Teachers in Sixty-Eight State Teacher Colleges", found that almost half of the professional requirements were devoted to methods, materials, curriculum, and principles. These areas were taught in one long course rather than in short courses in slightly more than 50 per cent of the cases. Special subjects such as art, music, and physical education were, however, taught as seperate courses. Student teaching was most frequently given as one long experience rather than as two short experiences. School organization, if taught at all, was not taught as a special course of school organization and administration. History of education accounted for an average of 1.91 semester-credit hours. Professional psychology accounted for an average of 5.11 semester-credit hours (9, p. 116).

Sequence of the curriculum. Many of the authors in the field of teacher education felt that there should be logical order for the student teacher to obtain his or her understandings, attitudes, and skills.

Borrowman felt that Professor Sharpe, collaborating author of Teacher Education for a Free People and the Ford Foundation groups, "both seem to agree that the professional sequence should be largely organized around student teaching and other directed activities (4, p. 456)." Caswell seemed to agree with this point of view: ". . . teacher

education curriculum should be organized with direct reference to professional performance responsibilities (8, p. 84)."

Armstrong listed four generalizations for teacher education. The second generalization read: "Breadth of view and grasp are best furthered by an alternation of direct experiences with theoretical discussions and intensive outside reading (2, p. 302)." The author concluded that Armstrong would agree with Sharpe, Caswell, and the Ford Foundation groups.

Armstrong gave a program for teacher education in which 15 per cent to 20 per cent of the entire program should be reserved for professional education, leading up to student teaching, the first semester of the senior year; child behavior and social processes should begin not later than the third year; and professional education would be concentrated in two areas, orientation course on methods and materials and full-time student teaching concluded by a seminar (2, p. 306).

Armstrong would have abolished the course organization of general psychology, principles of elementary education, organizational administration, and classroom management. He would not do away with the content of these classes.

In table 2, page 10, is given curriculum sequence as recommended by Stratemeyer and the New York State Teachers Colleges. On page 10 is also found the curriculum sequence as recommended by the National Education Association

Commission on Teacher Education. These curricula would appear to be in agreement with Armstrong.

Clark found that student teaching was most likely to be taken in the junior or senior year, and less likely to be given in two periods, early junior year and late senior year. History of education was most likely to be found in the senior year. Child psychology was most likely to be given in the sophomore or junior year. Clark's article was very fragmentary and offered little more information than has been given here (9, p. 116).

The Commission on Teacher Education said, concerning the sequence of student teaching (11, p. 268):

> Student teaching is being widely re-examined as an element in the preparation of teachers toward providing more experiences with children, schools and communities prior to student teaching proper.

Butterweck stated that student teaching should come in two installments: the first installment should come at the beginning of the junior year, the second installment should come during the senior year, and should last until the student can "carry on" on his own (5, p. 141).

In a letter of correspondence to the author, James C. Stone, Director of Teacher Education at the University of California, Berkeley, had this to say about the problem of curriculum sequence:

> While it is too early, of course, to offer any conclusions, let me at least let you in on the present tentative conclusions to which we are coming. The first is that the present sequence of teacher education in most instances has been organized in terms of a logical pattern as seen by

> the teacher-educator himself. Since it is logical to him, it is also psychologically oriented to him also. Second, this logic in the minds of the expert, however, is not seen as logical by a learner and hence appears to him to lack psychological orientation from his point of view. As a consequence, in our experimental program (sometimes we refer to it as the upside-down approach) we have completely reversed the sequence. We give Growth and Development and Educational Psychology at the end of a year of internship teaching rather than as usual at the beginning and find that by this time such considerations have real significance for the prospective teacher and are psychologically oriented in terms of the problems as he sees them.[1]

Summary

Does an ideal teacher education curriculum now exist? Should the ideal curriculum be sought or constructed?

Clark found that the typical teacher college did not exist (9, p. 116).

The Commission on Teacher Education concluded, "The commission knows of no program now existing that could be wholly satisfactory. It assumes that none ever will exist (11, p. 266)."

The commission recommends, ". . . continuous improvement rather than to imagine and set forth some ideal program (11, p. 267)."

Borrowman concluded from her review that, "There is no evidence that agreement concerning the timing of professional sequence is nearer now than it was a decade ago (4, p. 452)."

Stratemeyer concluded that no single master plan should be sought (16, p. 174).

Armstrong felt that (1, p. 47):

1. For complete text refer to appendix A.

> Research has never told man in any field of endeavor what he should do. It has helped his understanding as to what is likely to happen under a given set of circumstances.
> . . . we would make a great mistake to wait for research to discover a good teacher education program.

Caswell, Bigelow, Stratemeyer, and Engleman did agree that students should start training in the professional education program as early as possible. They did not note which college years should be the starting time. Caswell, Bigelow, and Stratemeyer left the starting time up to the needs of the individual student.

Caswell, Armstrong, and Cason stated there should be a sequence for a curriculum of professional teacher ecucation but they did not indicate either partially or entirely what the sequence should be.

The author did not find, in the literature that has been cited, a program of professional teacher education that would be in complete agreement with all of the authors quoted. The National Education Association and Stratemeyer did suggest essential elements of the professional teacher education program but only in very large areas. The amount of time for the larger areas or the program could not be affixed.

The author concluded from the review cited in this study that: (1) There is not an established, as such, group of essential elements for a professional elementary teacher education program; and (2) There is not a recommended sequence for the non existing, essential elements.

This review of the literature did not find a positive answer for premises one and two of this study.

ANALYSIS OF FOUR PROFESSIONAL PROGRAMS

This chapter of the study is devoted to the professional programs for teacher education at four well known teacher institutions. The information presented here has been gained almost in the main from the institutions' catalogues. Other information about the programs was requested by mail from the institutions. The four institutional programs presented in this phase were those of:

New York City College, of the College of the City of New York.

George Peabody College for Teachers, Nashville, Tennessee.

State Teachers College, Troy, Alabama.

University of California, Berkeley, California.

All of the institutions replied to the inquiries for information about the professional elementary teacher training programs. The University of California stated that all information concerning its professional elementary teacher training program could be found in the regularly published college program. Dr. Stone of the University of California did make some statements that were of interest to this study, and they have already been referred to on page 17, and are appendixed to this study. George Peabody College for Teachers and State Teachers College replied by

sending material that was mimeographed for student use. The same information was found in the regularly published catalogue. The College of the City of New York replied to the request by sending a copy of regularly published catalogues of each of the City Colleges.

The replies to the request for additional information indicated that all the information about the professional teacher education programs was to be found in the regularly published catalogues. This also indicated that they had no research for the existance of their respective programs. Dr. Stone of the University of California stated that his staff was working on the problem of professional sequence but that they had not arrived at conclusions.[1]

A report on how the City College's program came into being has been reported in Teacher Education: The Decade Ahead (16, pp. 56-66).

City College

The New York City College follows a very definite sequence in the professional program for teacher education. The program starts in the upper sophomore year (17, pp. 59-66). All classes are required in the order given in table 3 (19, p. 26).

The common professional classes are given first, the methods classes are given second, and student teaching is given third. The common professional classes include those classes that build understanding of the school and the child. The three methods classes are designed to teach

1. Appendix A

methods and materials for teaching the subject areas of the elementary school. Education 41.1 includes the methods materials for language arts and social studies. Education 41.2 includes the methods and materials for mathematics, science, and health. Education 42.1 includes methods and materials for arts and crafts, music, dance, and dramatics. Student teaching, Education 43, is followed by a problems seminar in which the student may work out some of the problems and misunderstandings that he encountered in student teaching.

Table 3. Professional elementary education program of the New York City College

Class No.	Class Description
Educ. 30	Contemporary Educational Thought and Practice
Educ. 32	Psychology of Childhood and Adolescence
Educ. 33	Field Experiences in Psychological Service
Educ. 35	Social and Historical Foundations of Educ.
Educ. 36	Psychology of Learning
Educ. 41.1	Methods and Material in El. Sch. Curr. I
Educ. 41.2	Methods and Materials in El. Sch. Curr. II
Educ. 41.3	Methods and Materials in El. Sch. Curr. III
Educ. 43	Observation and Student Teaching in El. Sch.
Educ. 50	Seminar in Problems of El. Sch. Teaching

Table 4 shows the areas of professional education and the required amount of time for each area at New York City College.

Education 50 was counted as materials and techniques in table 4.

Table 4. Semester hours and quarter hours required in the three areas of professional education at New York City College

Area	Semester Hr.	Quarter Hr.
Common Professional	13	19.5
Materials and Techniques	13	19.5
Student Teaching	10	15
Total	36	54.0

George Peabody College for Teachers

The education courses at George Peabody are planned to integrate theory and practice. They should be taken in the order given in table 5 (18, pp. 41-42).

Table 5. Professional elementary education program at George Peabody College for Teachers

Class No.	Class Description
Educ. 320	History of Education in U.S.
Educ. 325	School and Society
Psych. 210A	Human Growth and Learning
Psych. 210B	Human Growth and Learning
Educ. 300	Guided Observation and Practice
Educ. 300B	Modern Methods and Materials
Psych. 301	Guidance and Adjustment in the Elem. Sch.
Psych. 384	Measurements and Evaluations in the Elem. Sch.
Educ. 300C	Instruction Techniques in Childhood Education
Educ. 401A	Student Teaching (Campus school)
Educ. 400A	Curriculum Problems in Elem. Education
Educ. 401B	Student Teaching (off Campus)
Educ. 410A	Teaching the Language Arts
Educ. 410B	Teaching the Social Studies

Table 5 shows that George Peabody College tends to

introduce the student into the program with limited experiences in each area of the program to be followed by a more extensive experience in each area of the program. The area for understanding the school and the child, the common professional area, is offered first in the curriculum. Student teaching is alternated with the methods classes. The reader will note there are two experiences in student teaching offered.

Table 6 shows the areas of professional education and the amount of time allotted to each of the areas at George Peabody College.

Table 6. Number of quarter hours required in the three areas of professional education at George Peabody College for Teachers

Area	Quarter Hr.
Common Professional	16
Materials and Techniques	24
Student Teaching	16
Total	56

State Teachers College, Troy, Alabama

The entire college program is planned for the student teacher at this institution. The freshman student is launched upon the college program by a class of bio-social development of the individual. This first class is designed to integrate, as a whole, the understandings of human growth and development. Students who transfer from the state

teachers college after the first year are given six quarter-credit hours in each of psychology, sociology, and biology.

The following table will show the professional curriculum at the State Teachers College. The sequence of the program is very non-flexable (20, pp. 38-39).

Table 7. Professional elementary education program of the State Teachers College, Troy, Alabama

Class No.	Class Description
371	Orientation to Teaching
372	Selection and Organization of Instructional Materials
373	Practice Teaching and Seminar
331	Human Growth and Development
332	Human Growth and Development
333	Human Growth and Development
431	A Cultural History of Western Education
432	Historical, Sociological, and Philosophical Foundation of American Education
433	Foundations of a Curriculum for Modern Living
471	Teaching of Reading and Language Arts
472	Practice Teaching and Seminar
473	Audio-Visual Materials and Methods

All of the classes (except 373 and 472) have a value of three quarter-credit hours. Practice teaching 373 and 472 both have a value of six quarter-credit hours. Class 373 is taken in the junior year and class 472 is taken in the last of the senior year.

The areas of professional education are alternated. The program starts by giving the student; (1) a common professional course, (2) a materials class, and (3) these two are followed by an experience in student teaching. The program starts over again offering the student larger

blocks of time in each area.

The following table shows the areas of professional education and the required amount of time for each area of the State Teachers College, Troy, Alabama.

Table 8. Number of quarter hours required in each of the three areas of professional education at the State Teachers College, Troy, Alabama

Area	Quarter Hrs.
Common Professional	18
Materials and Techniques	9
Student Teaching	12
Total	39

University of California at Berkeley

The professional teacher education program for students of the University of California at Berkeley starts in the junior year. The sequence of the program is found in table 9 (21, p. 119).

The University of California starts the program by offering common professional classes first, the methods and techniques classes second, and student teaching last. The actual last class taken appears to the author to be much like a follow-up seminar, as offered in two of the other colleges, State Teachers College and New York City College.

Table 9. Professional elementary education program of the University of California at Berkeley

Class No.	Class Description
Educ. 110	Introduction to Educational Psychology
Educ. 130	Elementary Education
Educ. 111	Growth and Development of Children
Educ. 131	Arithmetic and Language in the Elem. Sch.
Educ. 132	Art and Music in the Elem. Sch.
Educ. 134	Reading and Literature in the Elem. Sch.
Educ. 138	Social Studies in the Elem. Sch.
Educ. 330A	Supervised Teaching, Professional Methods
Educ. 330C	Supervised Teaching, Education
Educ. 331	Supervised Teaching, Materials of Instruction and Class Management

Table 10 shows the areas of professional education and the required amount of time for each area at the University of California, Berkeley.

Table 10. Number of quarter hours required in each of the three areas of professional education at the University of California, Berkeley

Area	Semester Hrs.	Quarter Hrs.
Common Professional	8	12
Material and Techniques	12	18
Student Teaching	8	12
Total	28	42

Education 331 was counted with materials and techniques in the above table.

Summary

The four professional elementary teacher education

programs analyzed in this study do not reveal a well defined sequential program. The class descriptions are so different among the program that it would be next to impossible to arrive at a program that would agree on class content without the added problem of sequence. The New York City College and the University of California did have the large areas, common professional, materials and techniques, and student teaching, in a common sequence. The four programs did have a problem solving class that either accompanied or followed student teaching.

State Teachers College and George Peabody College for Teachers have as their main function the education of professional teachers. It is interesting to note that these two institutions have an established program for the student of both general education and professional education. The student is allowed very little academic freedom. The other two institutions have only a planned program for professional education. These two institutions, State Teachers College and George Peabody College for Teachers, by nature of their existance, offered an early introduction into the field of teacher education, although the New York City College and University of California did start their professional program in the late sophomore year or early junior year.

Because of a time factor all of the programs frequently required two or more classes to be taken per quarter or per semester.

The amount of time allowed for the areas of professional education is summerized in table 11 for the four institutions.

Table 11 readily shows the difference in the amount of time spent in the different areas of the professional program of the four institutions.

Table 11. The number of quarter hours required in the three areas of professional education for four teacher training institutions

Area	Quarter Hrs. Per Institution				
	NYCC	GPC	STC	UC	Average
Common Professional	19.5	16	18	12	16.12
Materials and Techniques	19.5	24	9	18	17.62
Student Teaching	15	16	12	12	13.75
Total	54.0	56	39	42	47.59

From this phase of the study the author has concluded: (1) The four programs did not place the same importance upon the individual areas of professional teacher education; (2) Each program did start with an introductory class to the professional teacher education program; and (3) Only one of the four programs did not conclude with student teaching.

It could be said that the four programs did have partial agreement as to what should be essential elements and sequence of a professional elementary teacher education program.

THE UTAH STATE UNIVERSITY CURRICULUM FOR ELEMENTARY SCHOOL TEACHERS

The information for this phase of the study was obtained from the 1956-57 catalogue bulletin of Utah State University (then Utah State Agricultural College) and from an analysis of 42 transcripts of elementary education majors of Utah State University. The transcripts were those of elementary student teachers who graduated in June of 1957 and had taken at least 45 quarter-credit hours of professional elementary education at Utah State University. This catalogue was chosen because it was the most up-to-date publication from which to obtain the teacher education program.

The 42 graduating students were divided into three groups: regulars, transfers, and interrupted. The regulars were the students that started as freshmen at the University in the fall of 1953 and continued their training at the University until they received their bachelors degree in 1957. The transfer students were those that started their college education at a junior college or some other four-year institution, but completed the last 2 years of their bachelors degree at the University. The interrupted students were those students that started their professional education sometime prior to 1953, as early as 1932, but were able to receive their bachelors degree in

1957. In some cases the interrupted students were transfers from other institutions, but did complete better than 50 per cent of the bachelors degree at the University.

With a sum total of 42 students to work with each of the three groups were small by nature. The regular group contained 13 students. The transfer group contained 19 students. The interrupted group contained 10 students.

Curriculum

The curriculum for elementary teacher education at Utah State University is designed to educate teachers who will satisfy the state requirements for certification and also satisfy the University requirements for the Bachelor of Science degree in elementary education.

The elementary student teacher must have 45 quarter-credit hours of professional study in the following areas:

I. Understanding the Child
II. Understanding the School
III. Curriculum and Methods
IV. Student Teaching
V. Electives

Area number V, electives, in reality was not a seperate area of the program, because the classes that were contained in area V could easily have been included under the other four areas of the program. Also, the other areas contain enough classes and credits to cover almost any program of the undergraduate student. The transcripts analyzed for study showed that the average student selected .79 credit

hours from area V.[1] The interrupted students selected only an average .3 credit hours; while the students of the other two groups, regular and transfer students, selected an average .93 credit hours. No student ever selected more than 3 credit hours from area V (See tables 15, 16, and 17).

Professional classes

The professional classes that were considered in this study are found listed in table 12, according to areas. These classes made up the professional curriculum for elementary teacher education at Utah State University.

Table 12. Professional courses of the curriculum of elementary teacher education

Area and Classes	Class No.	Credit
*Introduction to Teaching	Educ. 50	2
I Understanding the Child		9
*Child Psychology and Development	Psy. 105	3
Psychology of Exceptional Children	Psy. 123	3
Mental Hygiene	Psy. 145	3
Theory and Techniques of Counseling	Psy. 183	3
Problems in Physical Growth	P.E. 84	3
*Public School Health	P.H. 155	4
The Child in the Family	C.D. 67	3
Pre-school Laboratory	C.D. 168	2
II Understanding the School		6
*Principles of Elementary Education	Educ. 103	4
*Organization and Administration	Educ. 114	3
Articulation of the Educ. Program	Educ. 116	3
Social Foundations of Education	Educ. 141	3
Social Psychology	Psy. 161	3
III Curriculum and Methods		12
*Elementary School Curriculum	Educ. 104	3
*Princ. of Teach. in the Elem. Sch.	Educ. 105	3
Teaching Reading	Educ. 107	3
Social Studies in the Elem. Sch.	Educ. 108	3
Arith. and Science in the Elem. Gr.	Educ. 109	3

1. All credit given at Utah State University is given in quarter-credit hours.

Table 12 (Cont'd)

	Class No.	Credit
Audio-Visual Aids in Education	Educ. 161	3
*Educ. Psych. for the Elem. Sch. Tea.	Psy. 108	3
*Childrens Literature	Eng. 122	3
Story Telling	Sp. 118	5
Elementary School Music	Mu. 150	3
Art Methods for Elem. Grades	Art 152	3
Physical Educ. in the Elem. Sch.	P.E. 117	3
Material and Meth. of Elem. Sch. PE	P.E. 182	3
Nursery School Methods	C.D. 174	2
IV Student Teaching		12
*Student Teaching in the Elem. Sch.	Educ. 106	12
Practice Teach. in the Nursery Sch.	C.D. 175	6
V Electives		
Diagnostic and Remedial Teaching	Educ. 110	3
History of Education	Educ. 182	3
Reading and Conference	Educ. 205	2
Application of Stat. to Ed. and Psy.	Psy. 112	3
Abnormal Psychology	Psy. 140	3
Social Psychology	Psy. 161	3

* These classes are required of all elementary training teachers.

Each student was required to take a minimum of 45 credit hours. A total of 38 credit hours were required by classes but 39 credit hours were required by areas. This discrepency of 1 credit hour is caused by the class values of each area not being equal to the area requirements. In area I, understanding of the child, the minimum requirement was 9 credit hours but the class values amount to 6 credit hours. In area II, understanding the school, the minimum requirement was 6 credit hours, but the required class values amount to 7 credit hours. The other three areas the minimum requirement and class values are equal.

The student is required to elect a total of 7 hours to complete the over-all minimum of 45 credit hours. Table 13 gives a breakdown of the areas according to the area minimum requirements and class values.

Table 13. Minimum requirements and required class values for each area

Area		Area Minimum Requirement	Required Class Values
I	Understanding the Child	9	7
II	Understanding the School	6	7
III	Curriculum and Methods	12	12
IV	Student Teaching	12	12
V	Electives	0	0
	Total	39	38

The curriculum has one class that is required of all teacher candidates, Introduction to Teaching. The analysis of transcripts showed that all of the regulars, took the class; 79 per cent of the transfers took the class; and 80 per cent of the interrupted took the class.

Table 14 shows that only 86 per cent of the graduating class of elementary student teachers took the introductory course to teaching. Of the students taking the class only 48 per cent of the students took it either prior to or current with another professional class. Introduction to teaching is a required class but the credit earned does not apply toward the curriculum requirements. This requirement causes each student to take 47 credit hours of professional education.

Table 14. Students of the three groups that participated in Introduction to Teaching

Groups	Student Participation	
	Did	Did Not
Regular	100%	-
Transfer	79%	21%
Interrupted	80%	20%
Average	86.33%	13.66%

The regular student on an average completed more class hours in each area than each of the other two groups of students. The regular students completed an average of 61.3 credit hours of professional education while the transfer students completed an average of 53.8 credit hours of professional education and the interrupted students completed an average of 52.6 credit hours of professional education and the interrupted students completed an average of 52.6 credit hours of professional education. If the number of credit hours of professional education is a factor in a teachers qualification it would appear that the regular students were the best qualified of the three groups and the interrupted students being the least qualified of the three groups. For a breakdown of the credit hours per student see tables 15, 16, and 17.

Table 15. The accumulated quarter-credit hours of the regular students

Student	Groups and Hrs. Per Group					
	I	II	III	IV	V	Total
1	13	7	36	12	-	68
2	12	7	35	12	-	66
3	13	7	29	18	3	70
4	13	7	26	18	-	64
5	7	7	23	18	-	55
6	12	7	27	12	3	61
7	10	7	26	18	3	64
8	10	7	32	12	-	61
9	7	7	27	12	3	56
10	10	7	27	12	-	56
11	10	7	29	12	-	56
12	10	7	26	12	-	55
13	13	7	29	12	-	61
Mean	10.77	7	28.77	13.84	.92	61.15
Elec.	3.77	1	16.77	1.84	.92	23.15
Elec. Range	0-6	1	11-24	0-6	0-3	17-32

Group I, Understanding the Child; Group II, Understanding the School; Group III, Curriculum and Methods; Group IV, Student Teaching; and Group V, Electives that may apply

Table 16. The accumulated quarter-credit hours of students of the transferred group

Student	Groups and Hrs. Per Group					
	I	II	III	IV	V	Total
1	10	7	27	12	-	56
2	10	10	24	12	-	56
3	13	7	29	12	3	64
4	7	7	26	12	3	55
5	3	7	27	18	-	55
6	6	4	21	12	3	46
7	10	7	26	12	-	55
8	12	7	21	18	-	58
9	13	7	18	18	-	56
10	10	3	24	12	-	49
11	3	7	32	18	3	63
12	7	7	29	12	-	55
13	12	7	24	12	3	58
14	10	7	21	12	-	50
15	7	7	24	12	3	53

Table 16 (Cont'd)

Student	Groups and Hrs. Per Group					
	I	II	III	IV	V	Total
16	10	7	26	12	-	55
17	13	3	20	12	-	48
18	13	7	15	18	-	53
19	10	3	18	12	-	43
Mean	9.43	6.37	23.79	13.58	.95	54.11
Elec.	2.43	-.63	11.79	1.58	.95	16.11
Elec. Range	-4-6	-4-3	6-20	0-6	0-3	8-26

Table 17. The accumulated quarter-credit hours of students of the interrupted group

Student	Groups and Hrs. Per Group					
	I	II	III	IV	V	Total
1	7	7	23	12	-	48
2	13	7	21	12	-	53
3	12	7	38	12	3	72
4	10	7	15	12	-	44
5	10	7	26	12	-	55
6	4	7	23	12	-	46
7	7	10	23	12	-	52
8	7	7	20	12	-	46
9	10	7	20	12	-	49
10	10	7	34	18	-	69
Mean	9.0	7.3	24.3	12.6	.3	53.5
Elec.	2	.3	12.3	.6	.3	15.5
Elec. Range	-3-6	0-3	3-26	0-6	0-3	6-34

Sequence

The University catalogue did not state a sequence for the program. If there was a sequence of the curriculum it was in the minds of the staff members as a group or as individuals and not stated in an official publication of either the University or the College of Education. There may also have possibly existed a sequence in the minds of the student.

The student in discussing classes may have suggested a curriculum sequence to each other.

For this phase of the study only the required professional classes were studied. The required classes are marked by an asterisk (*) in table 12. At this point each student's transcript was analyzed to find out which class or classes were taken first, second, third, etc. Each class was given a rank order. Classes that were taken during the same quarter were given the same rank order.

Tables 19, 20, and 21 of appendix B of this study show the rank order in which each student took each required class of his professional education. Because the students were not required to start their professional preparation during any one particular quarter some students have taken several classes concurrently, therefore, many classes have the same rank order.

The longest period of professional education for any one student of the regular group extended over a period of eight quarters, while the shortest period of professional education only extended for a period of four quarters. This does not mean that two students of this group completed all professional work in only four quarters, but that these two students, or seven per cent of the group, so arranged the work so that the required classes were extended for only four quarters. The average number of quarters needed for the required classes for this group was 5.9 quarters.

The longest period of professional education for any one student of the transfer group extended over a period

of eight quarters, while the shortest period only extended for a period of three quarters. This means that three students, or six per cent of the group, completed all of the required classes in one year. The average number of quarters needed for the required classes for this group was 4.5 quarters. This can be determined from the tables in appendix B.

The longest period of professional education for any one student of the interrupted group extended over a period of seven quarters, while the shortest training period only extended for a period of four quarters. The average number of quarters needed for required classes for this group was 5.3 quarters. This can be seen in table 20 appendix B.

The analysis of the rank order of the required professional classes reveals a partial sequence in the professional education program. The analysis shows that Education 50 was taken as a first class by the average student in the three groups. Education 105 and Education 106 were taken as a last class by all but one student of the entire group of students studied.

The other seven professional classes showed somewhat less of a sequence pattern. This is shown in table 18.

It was probably necessary that many of the classes be taken concurrently because of a time factor. If the sequence allowed only one class to be taken per quarter the student would have to start taking the required professional education classes in the third quarter of the freshman year. This would not be possible for students

that do not select a major until the lower division work is complete. It would also be necessary for interrupted students and transfer students to take many classes concurrently. This is shown more graphically in figure 1.

Table 18. Sequence of the required professional education classes

Group	Ed. 50	Eng. 122	Psy. 105	Ed. 103	Ed. 114	Ed. 104	P.H. 155	Psy. 108	Ed. 105	Ed. 106
Regular	1	2	3	4	2	7	5	6	8	8
Transfer	1	2	4	3	6	4	5	7	8	8
Interrupted	1	3	5	2	4	6	6	7	8	8

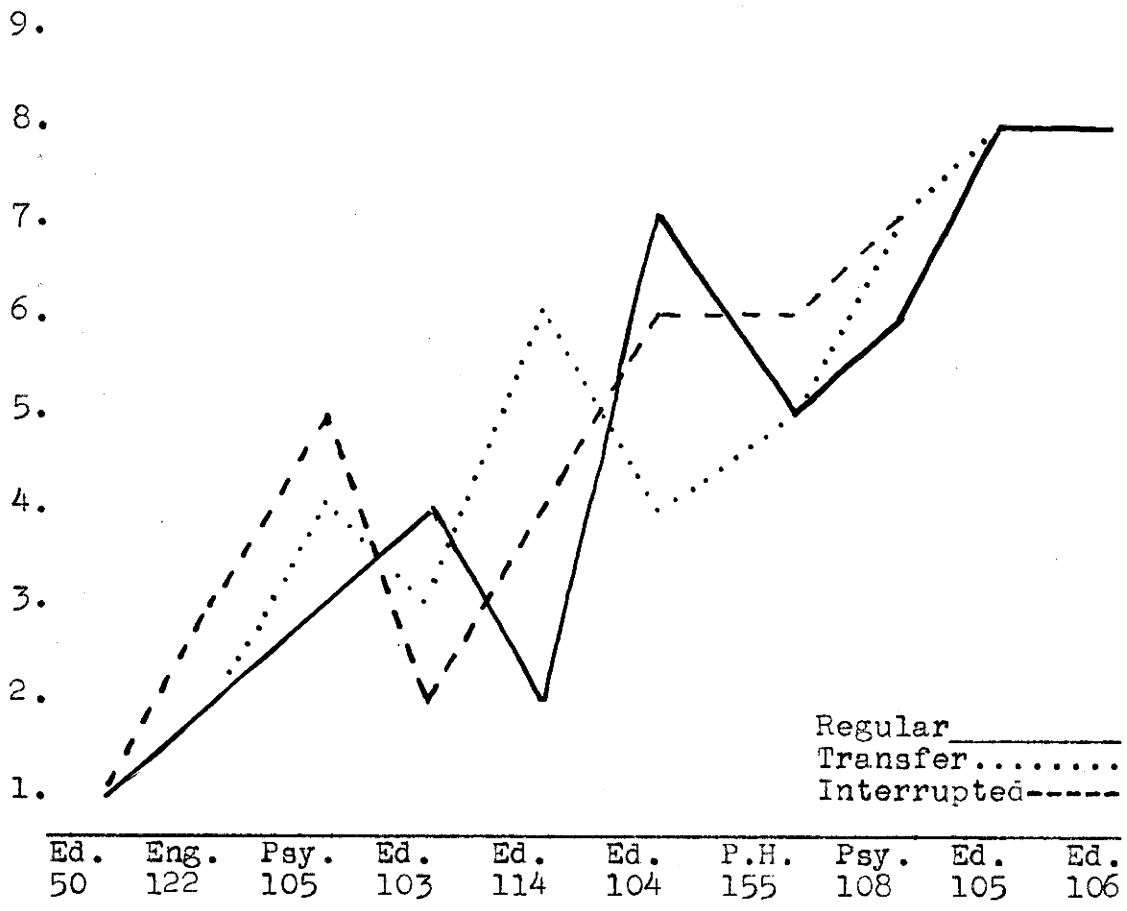

Figure 1. Sequence of the required professional education classes

Summary

Tables 19, 20, and 21 in appendix B of this study show that many of the students did not take all of the classes that were required by the University. Of the regular group two students or 6.5 per cent of the group failed to complete all the requirements. Of the transfer group twelve or 63 per cent of the students failed to complete all of the requirements. Of the interrupted group three students or 20 per cent of the group failed to complete all of the requirements. A total of 38.1 per cent of the 1957 graduating class failed to complete all of the professional elementary education requirements. In some situations the College of Education permits other classes to be substituted for the required classes. This often occurs in the case of transfer students or students that have changed their major from secondary to elementary education.

The large number of incomplete requirements in the transfer group may be due to classes that were taken at another institution. This seems to have been the logical answer.

The groups as a whole did complete more quarter-credit hours in professional training than were required of them. The regular students completed considerably more work than did the other sub-groups.

A sequence does seem to exist, even though it is not stated in an official publication, but this was not a complete sequence where one class was taken per quarter.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

It was not the purpose of this study to either establish a sequence for a professional elementary teacher education program or dictate what changes should be made in the sequence of the professional elementary teacher education program at Utah State University. This phase of the study may, however, point out some of the problems that existed in the Utah State University professional elementary teacher education program.

Summary

The purpose of the study was: (1) What are the essential elements of a professional elementary teacher education program; (2) Assuming there are essential elements is there a recommended sequence? and (3) To what extent do the students at Utah State University follow this sequence.

The methods used for securing the data for this study were: studying the literature that was concerned with the professional program of elementary teacher education; studying the professional elementary teacher education programs of four professional teacher education institutions; and studying the transcripts of 42 elementary education graduates of Utah State University.

Conclusions

The review of literature neither revealed common agreement on the essential elements of a professional elementary teacher education program nor revealed a recommended sequence for the professional elementary teacher education program. The review of literature did recommend that each professional elementary education institution develop its own sequence.

The analysis of four professional programs did reveal a partial common sequence for the professional teacher education program. Each program started with an introduction to education, and three of the four schools finished with student teaching near the end of the professional program. The professional program of each school had a very rigid sequence.

The students at Utah State University do select the classes of the professional elementary teacher education program in a partial sequence. The average student started the program with introduction to education and finished the program with student teaching.

This study did not reveal the essential elements of the professional elementary teacher education program. This study did find that an introduction to education is likely to be the first experience in the sequence of professional elementary education and student teaching is likely to be the last experience in the sequence of professional elementary education. Utah State University

students do select classes of the professional program in a partial sequence.

Recommendations

1. It is recommended that the College of Education study its program of professional training for elementary teachers to determine advantages or disadvantages in the present sequence of courses.

2. It is recommended that the College of Education constantly evaluate the professional elementary teacher education program in terms of the essential elements for the professional elementary teacher education program.

3. It is recommended that the College of Education experiment with the sequence of the professional program, to determine the best learning sequence for the student teacher.

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APPENDIX A

COMMUNICATIONS

UNIVERSITY OF CALIFORNIA
November 8, 1957

School of Education
Berkeley 4, California

Mr. C. Lee Colston
755 N. 7th E.
Logan, Utah

Dear Mr. Colston:

I am writing in response to your letter of November 2 suggesting that I might have materials on hand regarding the problem of educational sequence for elementary teachers.

I am afraid Gene has over-estimated in this instance. The only materials we have on this particular problem regarding our own elementary candidates is that which appears in the University catalog which outlines the presence sequence for those pursuing a general elementary credential.

We have done a good deal of thinking with regard to this problem of sequence as a result of our experimental teacher education program. However, this program is at present confined to preparation of secondary teachers, a sequence of experimentation which applies equally well to the elementary level.

While it is too early, of course, to offer any conclusions, let me at least let you in on the present tentative conclusions to which we are coming. The first is that the present sequence of teacher education in most instances has been organized in terms of a logical pattern as seen by the teacher-educator himself. Since it is logical to him, it is also psychologically oriented to him also. Second, this logic in the minds of the expert, however, is not seen as logical by a learner and hence appears to him to lack psychological orientation from his point of view. As a consequence, in our experimental program (sometimes we refer to it as the upside-down approach) we have completely reversed the sequence. We give Growth and Development and Educational Psychology at the end of a year of internship teaching rather than as usual at the beginning and find that by this time such considerations have real significance for the prospective teacher and are psychologically oriented in terms of the problems as he sees them.

If you keep in touch with us we will send you further information as we gather data regarding this hypothesis.

Sincerely,

James C. Stone
Director of Teacher Education

JCS:ish

TEACHERS COLLEGE
Columbia University
New York 27, N.Y.

December 11, 1957

Mr. C. Lee Colston
755 North 7th Street, E.
Logan, Utah

Dear Mr. Colston:

I have your very interesting letter regarding the professional sequence in teacher education. I am sorry that other materials used in connection with the work reported in Teacher Education for a Free People have been returned. I can, however, make the following comments at this time which may be of help. The first is to call your attention to Chapter 7 in which the sequence of professional elements is projected in three ways. I refer, for example, to Plan I on page 243 ff. (see especially pages 243, 244, 252, 257), to Plan II on page 263 and Plan III on page 266.

A group of advanced students and I are at work on the same problem that you are dealing with. Shortly after the Christmas holiday we expect to have projected several answers to the question of sequence. I shall be glad to send you copies of our proposals at that time.

Meanwhile, it seems to us to be very important that the professional sequence be developed with the following thoughts in mind:

1. That both general and professional education be a part of each of the college years.

2. That work in the professional sequence be developed in large blocks so that the interrelatedness of various professional elements are clearly seen by the prospective teacher. One such block might well relate child growth and development, the nature of learning, and the selection of curriculum experiences.

3. That the sequence should deal with problems which are real and meaningful to students at their respective stages of development. This we feel involves the use of both direct and vicarious experiences.

If, as you work further on this problem, there are specific questions which you care to raise, please do not hesitate to write again.

Sincerely yours,

FS:so

Florence Stratemeyer

APPENDIX B

Tables of Sequence

Table 19. Sequence of the required professional classes for regular students

Stud.	Ed. 50	Psy. 105	P.H. 155	Ed. 103	Ed. 114	Ed. 104	Ed. 105	Psy. 108	Eng. 122	Ed. 106
1	2	9	10	5.5	5.5	3.5	7.5	3.5	1	7.5
2	2.5	7	6	4	1	10	8.5	2.5	5	8.5
3	1	7.5	3	5.5	7.5	5.5	9.5	4	2	9.5
4	1	4.5	9.5	3	4.5	6	7.5	9.5	2	7.5
5	4	4	4	4	1	7.5	9.5	7.5	4	9.5
6	3.5	1	3.5	7.5	3.5	6	9.5	7.5	3.5	9.5
7	1	2.5	7.5	5.5	2.5	5.5	9.5	4	7.5	9.5
8	1	4	2.5	5.5	7.5	2.5	9.5	5.5	7.5	9.5
9	1.5	4	1.5	4	4	6	9.5	7.5	7.5	9.5
10	1.5	10	4	5.5	3	5.5	7.5	9	1.5	7.5
11	2.5	2.5	8	7	5.5	5.5	9.5	2.5	2.5	9.5
12	2	2	7	5	2	5	8.5	-	5	8.5
13	1	4.5	7	2	4.5	6	8.5	-	3	8.5
Mean	1.87	4.82	5.65	4.92	4.0	5.74	8.81	5.73	4.0	8.81

Table 20. Sequence of the required professional classes for interrupted students

Stud.	Ed. 50	Psy. 105	P.H. 155	Ed. 103	Ed. 114	Ed. 104	Ed. 105	Psy. 108	Eng. 122	Ed. 106
1	-	-	2	2	-	2	5.5	4	7	5.5
2	1.1	2.5	2.5	4.5	6	4.5	9.5	7	8	9.5
3	1	3	6.5	8	5	3	9.5	6.5	3	9.5
4	1	7	3	5	7	3	9.5	7	4	9.5
5	2.5	6.5	8	2.5	2.5	5	9.5	2.5	6.5	9.5
6	-	-	3.5	3.5	2	7	5.5	-	1	5.5
7	3.5	9.5	9.5	1.5	3.5	6	7.5	5	1.5	7.5
8	1	3.5	8.5	3.5	2	8.5	5.5	8.5	8.5	5.5
9	1.5	4.5	6	3	7.5	7.5	9.5	4.5	1.5	9.5
10	2	4.5	4.5	4.5	7.5	7.5	9.5	4.5	1	9.5
Mean	1.69	5.13	5.4	3.83	4.77	5.4	8.1	5.9	4.2	8.1

Table 21. Sequence of the required professional classes for transfer students

Stud.	Ed. 50	Psy. 105	P.H. 155	Ed. 103	Ed. 114	Ed. 104	Ed. 105	Psy. 108	Eng. 122	Ed. 106
1	3.5	3.5	3.5	-	3.5	1	8.5	7	6	8.5
2	7	4.5	2	2	4.5	7	9.5	7	2	9.5
3	2.5	2.5	2.5	5	6.5	6.5	8.5	2.5	-	8.5
4	-	4.5	6	4.5	3	1.5	7.5	1.5	-	7.5
5	1.5	-	-	4.5	3	1.5	7.5	4.5	6	7.5
6	-	3	4	1.5	-	1.5	6	-	6	6
7	-	3	9	3	6	3	7.5	3	3	7.5
8	2.5	-	6	2.5	6	2.5	8.5	6	2.5	8.5
9	2.5	6.5	6.5	2.5	6.5	2.5	9.5	6.5	2.5	9.5
10	2	2	6	-	6	4	8.5	6	2	8.5
11	2.5	2.5	-	6	6	6	8.5	2.5	2.5	8.5
12	3	3	3	6.5	6.5	3	8.5	10	3	8.5
13	1	4.5	8	4.5	3	6.5	9.5	6.5	2.5	9.5
14	2.5	4	1	2.5	7	7	9.5	5	7	9.5
15	3	6.5	1.5	6.5	4	5	8.5	10	1.5	8.5
16	3	6	1	3	10	6	8.5	6	3	8.5
17	1.5	3.5	5	-	1.5	3.5	6.5	-	-	6.5
18	6.5	4	1.5	4	1.5	-	8.5	6.5	4	8.5
19	2	-	-	-	3.5	3.5	5.5	-	1	5.5
Mean	2.91	3.97	4.16	3.9	4.89	3.97	8.15	5.65	3.38	8.15